

What is claimed is:

1. A monopole low frequency test woofer, comprising:

a rigid mounting plate having an acoustical opening;

5 a monopole driver having a high mass cone and low resonance in free air, said driver being mounted on said mounting plate with a basket of said driver fitting about said acoustical opening;

10 an inductor connected in series with said monopole driver;

a rear tub attached to said mounting plate forming an enclosure housing said monopole driver and inductor; and

15 an electrical connector on said rear tub for connecting said monopole driver and inductor to an external circuit.

2. A test woofer, as set forth in claim 1, wherein said inductor contours frequency response of monopole driver to match frequency response of a vehicle dipole speaker over a frequency range of
5 interest.

3. A test woofer, as set forth in claim 2, wherein the frequency range of interest is from about 40 Hz to about 200 Hz.

4. A test woofer, as set forth in claim 1, including a seal between said mounting plate and said tub.

5. A test woofer, as set forth in claim 1, wherein said rear tub is sealed to a rear surface of said mounting plate.

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5 6. A test woofer, as set forth in claim 1, wherein a top portion of a rear panel of said rear tub is offset inward toward said mounting plate to have lesser depth than a bottom portion of said rear tub to thereby form a slot.

7. A test woofer, as set forth in claim 6, wherein said electrical connector is positioned in said slot.

8. A test woofer, as set forth in claim 7, wherein said electrical connector is flush with said lower portion of said rear panel.

9. A band limited radiating source, comprising:

a rigid mounting plate having an acoustical opening;

5 a monopole low frequency driver mounted on said mounting plate with a basket of said driver fitting about said acoustical opening;

a tub sealed to said mounting plate forming an enclosure housing said monopole driver; and

10 an electrical connector on said tub for connecting said monopole driver to an external circuit.

10. A band limited radiating source, as set forth in claim 9, including an inductor connected in series with said monopole driver.

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11. A band limited radiating source, as set forth in claim 9, wherein said monopole driver has a frequency response range of about 40 Hz to about 200 Hz.

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12. A band limited radiating source, as set forth in claim 9, including a seal between said mounting plate and said tub.

13. A band limited radiating source, as set forth in claim 9, wherein said rear tub is sealed to a rear surface of said mounting plate.

14. A band limited radiating source, as set forth in claim 9, wherein a top portion of a rear panel of said rear tub is offset inward toward said mounting plate to have lesser depth than a bottom portion of said rear tub to thereby form a slot.

15. A band limited radiating source, as set forth in claim 14, wherein said electrical connector is positioned in said slot.

16. A band limited radiating source, as set forth in claim 15, wherein said electrical connector is flush with said lower portion of said rear panel.

17. A method for determining loss in baffling due to speaker environment in a vehicle being non-ideal, comprising the steps of:

producing a monopole low frequency test woofer having a frequency response and resonance output matching an optimized vehicle dipole speaker;

determining output of the vehicle dipole speaker;

measuring output of said test woofer in said vehicle; and

comparing said outputs with appropriate level correction and determining frequency response difference which is the loss in baffling due to speaker environment in the vehicle.

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18. A method, as set forth in claim 17,
wherein the test woofer producing step includes:
fabricating a rigid mounting plate having an
acoustical opening;

5 mounting a monopole driver having a high mass
cone and low resonance in free air on said mounting
plate with a basket of said driver fitting about said
acoustical opening;

10 forming a tub and sealing the tub to said
mounting plate thereby forming an enclosure housing
said driver; and

attaching an electrical connector on said tub
for connecting said monopole driver to an external
circuit.

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19. A method, as set forth in claim 17,
wherein the tub forming step includes forming a slot in
said tub for receiving said electrical connector.

20. A method, as set forth in claim 17,
wherein the test woofer producing step includes
attaching an inductor in series with said monopole
driver.

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